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| 10/699,568 | 10/31/2003 | Surya Varanasi | 112-0132US | 1585 |
| 29855 7590 12/18/2007 WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI, L.L.P. 20333 SH 249 SUITE 600 HOUSTON, TX 77070 | | | EXAMINER DUONG, FRANK | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/699,568

Applicant(s)

VARANASI ET AL.

Examiner

Frank Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1-3,6,19,20,29,30,32-35,38,51,52,61,62,64-67,70,83,93-95,97-99,102,114,115,124 and 125.

Continuation of Disposition of Claims: Claims rejected are 1-3,6,19,20,29,30,32-35,38,51,52,61,62,64-67,70,83,93-95,97-99,102,114,115,124 and 125.

DETAILED ACTION

1. This Office Action is a response to communications dated 10/12/07. Claims 1-3, 6, 19-20, 29-30, 32-35, 38, 51-52, 61-62, 64-67, 70, 83-83, 93-95, 97-99, 102, 114-115 and 124-125 are pending in the application.

Information Disclosure Statement

2. The information disclosure statement filed 11/08/07 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been considered and placed in the application file.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3, 6, 19-20, 29-30, 32-35, 38, 51-52, 61-62, 64-67, 70, 83-83, 93-95, 97-99, 102, 114-115 and 124-125 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1-3, 6, 19-20, 29-30 and 32, the claims commonly recite the terms "an edge switch" in numerous places, i.e., lines 3, 5 and 12 and "one switch" in line 7 of base claim 1. It is unclear whether the term refers to the same element. In addition, the term "them", twice recited on line 3, is vague. It is unclear what "them" refers to. In addition, "a switch" is again recited on line 3 of claim 29.

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As per claims 33-35, 38, 51-52, 61-62 and 64, the claims commonly recite the terms "an edge switch" twice on line 6 and "a switch" on line 2 and 8 of base claim 33. It is unclear whether the terms refer to the same element.

As per claims 65-67, 70, 83-84 and 93-95, the claims commonly recite the terms "an edge switch" twice on line 8; "a switch" on line 2, and "two switches" on line 11 of base claim 65. It is unclear whether the terms refer to the same element.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3, 6, 19, 29-30, 32-35, 38, 51-52, 61-62, 64-67, 70, 83-83, 93-95, 97-

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99, 102, 114-115 and 124-125 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valdevit et al (Patent Application Publication US 2002/0156918) (hereinafter "Valdevit") in view of Tech Note: Exploring Brodecade ISL Trunking, pages 1-26, January 2002 (hereinafter "Tech Note").

Regarding **claim 1**, in accordance with Valdevit reference entirety, Valdevit discloses a method of routing a flow of frames for a core-edge switch configuration (Figs. 1-6) comprising: receiving at least one frame of the flow of frames at an edge switch of the core-edge switch configuration (*Fig. 6; block 602 and paragraph [0063]*); applying a process to select a route from said edge switch to a core switch for said at least one frame of the flow of frames to reduce frame traffic congestion in said core-edge switch configuration (*Fig. 6; blocks 604-608 and paragraph [0063] and thereafter*); transmitting said at least one frame from an edge switch of the core-edge switch configuration (*Fig. 6; block 610 and paragraph [0063]*). It appears that Valdevit may not explicitly teach "to select a route through at least two switches forming the code-edge switch configuration." However, such limitation lacks thereof from Valdevit reference is well known and taught by the Tech Note.

In an analogous art, the Tech Note teach inter-switch link (ISL) trunking (see Tech Note; page 3, Introduction), comprising, among other things, the limitation of "to select a route through at least two switches forming the code-edge switch configuration" (Tech Note; page 23, Fig. 17 and Trunking Group discussed on page 22 to include using "a simple algorithm to optimally distribute frames across a set of available paths

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that link two adjacent switches") to enable traffic to be optimally shared across available ISLs while preserving in-order delivery (Tech Note; page 3, Introduction).

Thus, it would have been obvious to those skilled in the art at the time of the invention to implement the Tech Note's teaching into Valdevit's to arrive the claimed invention with a motivation to enable traffic to be optimally shared across available ISLs while preserving in-order delivery (Tech Note; page 3, Introduction).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said process comprises a pseudo-random process (see *Valdevit; Fig. 6; block 606 or Abstract*).

Regarding **claim 3**, in addition to features recited in base claim 2 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein applying said pseudo-random process comprises applying a hash function (see *Valdevit; Fig. 6; block 606 or Abstract*).

Regarding **claim 6**, in addition to features recited in base claim 3 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said hash function is applied to possible routes through the core-edge switch configuration to balance the flow of frames through the core-edge switch configuration to an external exit port of said configuration (see *Valdevit; Fig. 6; block 608 and paragraph [0063] and Abstract and Tech Note; Fig. 17*).

Regarding **claim 19**, in addition to features recited in base claim 1 (see rationales discussed above), Valdevit in view of Tech Note also discloses using odd numbers of hash function to select routes 352, 344 and 356 and even numbers of hash

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function to select routes 354, 346 and 358. It is obvious to those skilled in the art that the numbers of the hash function could be considered as a weight in route selection or it is obvious, in addition to using hash function's numbers, to use weight in preferential treatment of route selection to provide a fair selection.

Regarding **claim 29**, in addition to features recited in base claim 1 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said route is selected based at least in part on a source tag and/or a destination tag added to said frame after said frame enters a switch of the core-edge switch configuration (Note: *Source and destination tags are discussed at paragraph [0063] and thereafter of the Valdevit*).

Regarding **claim 30**, in addition to features recited in base claim 29 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said source tag and/or said destination tag is stripped off said frame before said frame exits the core-edge switch configuration (Note: *Adding and removing source and destination tags are discussed at paragraph [0063] and thereafter of the Valdevit*).

Regarding **claim 32**, in addition to features recited in base claim 1 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said switches of said configuration comprise Fibre Channel compliant switches (see Valdevit; *Fig. 2 and description of fibre channel compliant switches is discussed in the background and thereafter*).

(Note: Claims 33-35, 38, 51, 61-62 and 64 call for an apparatus having limitations mirrored method steps of claims 1-9 and 29-32. Thus, they are rejected by the same rationales discussed above and as below)

Regarding **claim 33**, in accordance with Valdevit reference entirety, Valdevit shows a switch fabric (*Fig. 1; 110*) comprising: at least a first switch and a second switch (*Fig. 2; 210-3,2 and 210-2,3 to 210-3,4*), said first and said second switch being communicatively coupled (*Fig. 2; 230 and 240*); said first switch (*Fig. 4*) including at least two core switches; at least two edges switches coupled to said at least two core switches so that a flow of frames is from a first edge switch to a core switch to a second edge switch to develop a core-edge switch configuration (*see Fig. 2 for connection details and the accompanied description of fabric 110 large number of switches*); said first switch selects a route for a frame of said flow of frames from an edge-switch to a core switch to reduce frame traffic congestion in a core-edge switch configuration (*Fig. 4 and paragraphs [0052] to [0054] or Fig. 6; blocks 604-610 and paragraph [0063] and thereafter*). It appears that Valdevit may not explicitly teach “to select a route through at least two switches forming the code-edge switch configuration.” However, such limitation lacks thereof from Valdevit reference is well known and taught by the Tech Note.

In an analogous art, the Tech Note teach inter-switch link (ISL) trunking (see Tech Note; page 3, Introduction), comprising, among other things, the limitation of “to select a route through at least two switches forming the code-edge switch configuration” (*Tech Note; page 23, Fig. 17 and Trunking Group discussed on page 22 to include*

using “a simple algorithm to optimally distribute frames across a set of available paths that link two adjacent switches”) to enable traffic to be optimally shared across available ISLs while preserving in-order delivery (*Tech Note; page 3, Introduction*).

Thus, it would have been obvious to those skilled in the art at the time of the invention to implement the Tech Note’s teaching into Valdevit’s to arrive the claimed invention with a motivation to enable traffic to be optimally shared across available ISLs while preserving in-order delivery (*Tech Note; page 3, Introduction*).

Regarding **claim 34** in addition to features recited in base claim 33 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic pseudo-randomly selects a route for a frame of said flow of frames (*Valdevit; Fig. 4 and paragraphs [0052] to [0054]*).

Regarding **claim 35** in addition to features recited in base claim 34 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic pseudo-randomly selects said route by applying a hash function (*Valdevit; Fig. 6; block 608 and paragraph [0063] and thereafter*).

Regarding **claim 38** in addition to features recited in base claim 35 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic applies said hash function to possible routes through said core-edge switch configuration to balance the flow of frames through said core-edge switch configuration to an external exit port of said core-edge switch configuration (*see Fig. 6; block 608 and paragraph [0063] and Abstract*).

Regarding **claim 51**, in addition to features recited in base claim 33 (see rationales discussed above), Valdevit in view of Tech Note also discloses using odd numbers of hash function to select routes 352, 344 and 356 and even numbers of hash function to select routes 354, 346 and 358. It is obvious to those skilled in the art that the numbers of the hash function could be considered as a weight in route selection or it is obvious, in addition to using hash function's numbers, to use weight in preferential treatment of route selection to provide a fair selection.

Regarding **claim 61** in addition to features recited in base claim 33 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic selects said route based at least in part on a source tag and/or a destination tag added to said frame after said frame enters a switch of said core-edge switch configuration (Note: *Source and destination tags are discussed at paragraph [0063] and thereafter*).

Regarding **claim 62** in addition to features recited in base claim 61 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said first switch strips said source tag and/or said destination tag off said frame before said frame exits said first switch (Note: *Adding and removing source and destination tags are discussed beginning at paragraph [0063] and thereafter in Valdevit reference*).

Regarding **claim 64** in addition to features recited in base claim 62 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said first switch comprises a Fibre Channel compliant switch (see *Valdevit; Fig. 2 and*

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description of fibre channel compliant switches is discussed in the background and thereafter).

(Note: The remaining claims call for an apparatus/methods having limitations variously relate to the above rejected claims. Thus, they are rejected by the same rationales discussed above and as below)

Regarding **claim 65**, in accordance with Valdevit reference entirety, Valdevit shows an apparatus (Fig. 1; 110) comprising: a switch (Fig. 2; 210 or Fig. 4), said switch (Fig. 4) including: at least two core switches; at least two edges switches coupled to said at least two core switches so that a flow of frames is from a first edge switch to a core switch to a second edge switch to develop a core-edge switch configuration (see Fig. 2 for connection details and the accompanied description of fabric 110 large number of switches); said first switch selects a route for a frame of said flow of frames from an edge-switch to a core switch to reduce frame traffic congestion in a core-edge switch configuration (Fig. 4 and paragraphs [0052] to [0054] or Fig. 6; blocks 604-610 and paragraph [0063] and thereafter). It appears that Valdevit may not explicitly teach "selecting a route through at least two switches forming the code-edge switch configuration." However, such limitation lacks thereof from Valdevit reference is well known and taught by the Tech Note.

In an analogous art, the Tech Note teach inter-switch link (ISL) trunking (see Tech Note; page 3, Introduction), comprising, among other things, the limitation of "selecting a route through at least two switches forming the code-edge switch configuration" (Tech Note; page 23, Fig. 17 and Trunking Group discussed on page 22 to include using "a simple algorithm to optimally distribute frames across a set of

available paths that link two adjacent switches") to enable traffic to be optimally shared across available ISLs while preserving in-order delivery (Tech Note; page 3, Introduction).

Thus, it would have been obvious to those skilled in the art at the time of the invention to implement the Tech Note's teaching into Valdevit's to arrive the claimed invention with a motivation to enable traffic to be optimally shared across available ISLs while preserving in-order delivery (Tech Note; page 3, Introduction).

Regarding **claim 66** in addition to features recited in base claim 65 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic pseudo-randomly selects a route for said frame of said flow of frames (see *Valdevit; Fig. 6; block 606 or Abstract*).

Regarding **claim 67** in addition to features recited in base claim 66 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic applies said hash function (see *Valdevit; Fig. 6; blocks 606-610 or Abstract*).

Regarding **claim 70** in addition to features recited in base claim 67 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic applies said hash function to possible routes through said cored-edge switch configuration to balance the flow of frames through said cored-edge switch configuration to an external exit port of said configuration (see *Valdevit; Fig. 6; blocks 606-610 or Abstract*).

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Regarding **claim 83**, in addition to features recited in base claim 65 (see rationales discussed above), Valdevit in view of Tech Note also discloses using odd numbers of hash function to select routes 352, 344 and 356 and even numbers of hash function to select routes 354, 346 and 358. It is obvious to those skilled in the art that the numbers of the hash function could be considered as a weight in route selection or it is obvious, in addition to using hash function's numbers, to use weight in preferential treatment of route selection to provide a fair selection.

Regarding **claim 93** in addition to features recited in base claim 65 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic selects said route based at least in part on a source tag and/or a destination tag added to said frame after said frame enters a switch of said core-edge switch configuration (Note: *Source and destination tags are discussed beginning at paragraph [0063] and thereafter*).

Regarding **claim 94** in addition to features recited in base claim 93 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said switch strips said source tag and/or said destination tag off said frame before said frame exits said score-edge witch configuration (Note: *Adding and removing source and destination tags are discussed beginning at paragraph [0063] and thereafter in Valdevit reference*).

Regarding **claim 95** in addition to features recited in base claim 65 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said

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switch comprises a Fibre Channel compliant switch (see *Fig. 2 and description of fibre channel compliant switches is discussed in the background and thereafter*).

Regarding **claim 97**, in accordance with Valdevit reference entirety, Valdevit shows a network (Fig. 2) comprising: a host (*Fig. 2 depicts details of switch fabric having a host (source or destination)*); a physical storage unit (*Fig. 2 depicts details of switch fabric connecting to other elements to include storage unit 136*); a first switch (210-3,2) (see *Fig. 2 for connection details*) communicatively coupled (230 and 240) to said host (*source or destination*) and said physical storage unit (136) (see Fig. 2 for connection details); said first switch including: at least two core switches; at least two edges switches coupled to said at least two core switches so that a flow of frames is from a first edge switch to a core switch to a second edge switch to develop a core-edge switch configuration (see *Fig. 2 for connection details and the accompanied description of fabric 110 large number of switches*); said first switch selects a route for a frame of said flow of frames from an edge-switch to a core switch to reduce frame traffic congestion in a core-edge switch configuration (*Fig. 4 and paragraphs [0052] to [0054] or Fig. 6; blocks 604-610 and paragraph [0063] and thereafter*). It appears that Valdevit may not explicitly teach “*selecting a route through at least two switches forming the code-edge switch configuration.*” However, such limitation lacks thereof from Valdevit reference is well known and taught by the Tech Note.

In an analogous art, the Tech Note teach inter-switch link (ISL) trunking (see Tech Note; page 3, Introduction), comprising, among other things, the limitation of “*selecting a route through at least two switches forming the code-edge switch*

configuration” (Tech Note; page 23, Fig. 17 and Trunking Group discussed on page 22 to include using “a simple algorithm to optimally distribute frames across a set of available paths that link two adjacent switches”) to enable traffic to be optimally shared across available ISLs while preserving in-order delivery (Tech Note; page 3, Introduction).

Thus, it would have been obvious to those skilled in the art at the time of the invention to implement the Tech Note’s teaching into Valdevit’s to arrive the claimed invention with a motivation to enable traffic to be optimally shared across available ISLs while preserving in-order delivery (Tech Note; page 3, Introduction).

Regarding **claim 98** in addition to features recited in base claim 97 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic pseudo-randomly selects said route for said frame of said flow of frames (see Valdevit; paragraph [0055] and thereafter).

Regarding **claim 99** in addition to features recited in base claim 98 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic pseudo-randomly selects said route by applying a hash function (see Valdevit; paragraph [0063] and thereafter).

Regarding **claim 102** in addition to features recited in base claim 99 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic applies said hash function to possible routes through said core-edge switch configuration to balance the flow of frames through said core-edge switch configuration

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to an external exit port of said core-edge switch configuration (see paragraph [0063] and thereafter).

Regarding **claim 114**, in addition to features recited in base claim 97 (see rationales discussed above), Valdevit in view of Tech Note also discloses using odd numbers of hash function to select routes 352, 344 and 356 and even numbers of hash function to select routes 354, 346 and 358. It is obvious to those skilled in the art that the numbers of the hash function could be considered as a weight in route selection or it is obvious, in addition to using hash function's numbers, to use weight in preferential treatment of route selection to provide a fair selection.

Regarding **claim 124** in addition to features recited in base claim 97 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said routing logic selects said route based at least in part on a source tag and/or a destination tag added to said frame after said frame enters a switch of said core-edge switch configuration (Note: *Adding and removing source and destination tags are discussed beginning at paragraph [0063] and thereafter in Valdevit reference*).

Regarding **claim 125** in addition to features recited in base claim 97 (see rationales discussed above), Valdevit in view of Tech Note also discloses wherein said switch strips said source tag and/or said destination tag off said frame before said frame exits said first switch (Note: *Adding and removing source and destination tags are discussed beginning at paragraph [0063] and thereafter in Valdevit reference*).

Response to Arguments

5. Applicant's arguments with respect to claims 1-3, 6, 19-20, 29-30, 32-35, 38, 51-52, 61-62, 64-67, 70, 83-83, 93-95, 97-99, 102, 114-115 and 124-125 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Krakirian et al (USP 7,120,728).

Luke et al (USP 6,985,956).

Soloway et al (USP 6,532,212).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**FRANK DUONG
PRIMARY EXAMINER**

December 11, 2007